

Unit 4 Plan

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Grade: 9
Subject: Algebra 1

Designed in School Year: 2010-2011
Unit: Systems of Equations and Inequalities
Estimated Timeframe: 6 weeks

| Unit topic and subtopics | Essential Learning | Standards | Assessments | Strategies |
|--|--|---|--|--|
| Systems of Equations and Inequalities | <p>Understandings (Students will understand that):</p> <ul style="list-style-type: none"> The characteristics of linear inequalities and their representations are useful in solving real-world problems. Systems of linear inequalities are used to model and solve real-world problems involving 2 variables. When a system is needed to analyze a situation, the solutions must satisfy all of the equations or inequalities. | <p>Illinois State Standards:</p> <p>8.A.3b 8.B.4a 8.B.4b 8.C.4a 8.C.4b 8.D.4</p> | <p>Anchor Performance Assessment:</p> <p>Task Overview: Exhibit mastery of skills presented in this unit by providing written solutions to a variety of algebraic problems.</p> | Homework assignments, class discussion, small group activities |
| Solving and Graphing Linear Inequalities | <p>Skills (Students will be able to):</p> <ul style="list-style-type: none"> solve a one-step linear inequality and graph its solution set on a number line solve a multi-step linear inequality write an inequality from a verbal expression solve a compound inequality and graph its solution set on a number line solve an equation involving absolute value and graph its solution set on a number line solve an inequality involving absolute value and graph its solution set on a number line | <p>College Readiness Standards:</p> <p>Expressions, Equations, & Inequalities (20-36)</p> <p>Basic Operations & Applications (16-19)</p> <p>Numbers: Concepts & Properties (20-23)</p> | <p>Products:</p> <p>Comprehensive written exam assessing the skills practiced in this unit.</p> | Tests and quizzes |
| Systems of Equations and Inequalities | <ul style="list-style-type: none"> solve a system of equations by graphing solve a system of equations by substitution solve a system of equations by elimination (addition/subtraction and multiplication) solve a system of linear inequalities (linear optimization problems) | <p>Graphical Representations (16-36)</p> <p>Common Core Standards:</p> <p>A-REI.6 A-REI.7 A-REI.12</p> | <p>Criteria:</p> <p>An exam score below 69.5% is failing. An exam score of 69.6% –76.4% is below average, 76.5%–84.4% is average, 84.5%–92.4% is above average, and 92.5% or above is excellent.</p> <p>Other Key Assessments/Evidence:</p> <p>Frequent quizzes assessing the skills practiced in this unit.</p> | <p>Oral participation: Students both ask and answer questions posed by the teacher and other students</p> <p>Notebook entries which include the results of:</p> <ul style="list-style-type: none"> demonstrations: students working individually, in pairs, or in groups demonstrate ideas using manipulatives, graph paper, calculators, or whiteboard non-routine problems: the student restates the problem in his own words, explores the problem by drawing a picture or a chart, chooses a strategy such as guess and test, looks for a pattern, logical deduction, working backward, or exhaustive listing, and carries out the chosen strategy to solve the problem error analysis and commentary, in which students keep a list of specific homework, tests, and quiz problems that resulted in errors; the format includes a statement of the problem as posed, a statement of the exact error made, and a correction and comment |